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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/510,438  
Filing Date: October 07, 2004  
Appellant(s): BRUCHMANN ET AL.

\_\_\_\_\_  
Bryan H. Davidson  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 03/13/08 appealing from the Office action mailed 12/14/07.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,316,538	ANDERSON ET AL.	12-2001
6,517,932	PEIFFER ET AL.	02-2003
97/38849	KACZUN	10-1997

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kaczun et al. (WO 97/38849) in view of Anderson et al. (US 6,316,538) as previously presented in the 06/19/07 and 12/14/07 Office Actions reiterated below.

Kaczun teaches per instant claim 1, a multilayer material for producing packaging, comprising at least one film of a polymeric material (12, Fig. 1 and associated text, of polyolefin polyethylene (PE)), one print layer obtainable by printing or coating with a printing ink (14, Fig. 1 and associated text, printed

ink), one barrier layer as claimed (10, Fig. 1 and associated text, perfume barrier odor), and one further film (11, Fig. 1 and associated text, of polyolefin polyethylene). Adhesives are used also adjacent to a second polymer layer to adhere a printed first layer, adjacent to the barrier layer (page 7, 2<sup>nd</sup> complete paragraph). The binder layer may comprise lacquer (embraces varnish).

Kaczun teaches polyethylene terephthalate (PET) may be used sandwiched between laminated of polyethylene, while costly, however, Kaczun still teaches it was known in the art to employ PET, and is thus an obvious choice. Claims 1-2, and 4-12 are addressed.

Kaczun does not expressly teach wherein said printing ink comprises a binder at least one hyperbranched polypolyester containing functional groups selected from the group consisting of OH, COOR, or COOH groups. Kaczun does teach water-proof properties and barriers for liquid perfumes (page 1).

Anderson teaches an aqueous dispersion coating binder (does not provide separation of ink and is an ink, Abstract) employed as an ink or varnish or adhesive or coats improving a variety of processing properties to a film. The binder is comprised of an A and B polymer mix composition using hyperbrached polymers such as polyester resins comprising carboxyl, and hydroxyl groups (embraces hyperbranched polyester as claimed, Abstract, 2:40-68, 3:1-30, 3:50-60, 5:65-6:35). The binder coating of Anderson is applied to olefin films employed in packagings exhibiting an improvement of water and oxygen barrier properties (25:35-55).

The acid value of the polyester of Anderson is about 40 to about 200 mg KOH/g, falling within Applicant's range of 1-200 mg KOH/g (see Abstract, 2:40-68, 8:50-35, 6:25-60, 6:25-30). Anderson does not expressly state the OH number as recited per instant claim 1, however, it is considered inherent, expected, or an obvious modification, especially since the same carboxylic acid, and hydroxyl groups of the same polyester is used (2:40-68, 8:50-35, 6:25-60, 6:25-30) thereby forming a similar composition, see instant specification using hydroxydicarboxylic acid (OH and COOH groups) and their ester derivatives also on page 11, lines 1-20).

It would have been obvious to one having ordinary skill in the art to have modified the film of Kaczun to include an ink or varnish as claimed because Anderson teaches the dispersion coating is used as a varnish, ink, adhesives, and coatings applied to olefin films employed in packagings (Abstract, 2:40-68, 2:40-68, 8:50-35, 6:25-60, 6:25-30, 3:1-30, 3:50-60, 5:65-6:35, 25:35-55, Anderson). Furthermore, unless the reference teaches away from applying the coating to any side of a film, it is obvious to provide the additional coating layer of Anderson, motivated by the desire to improve water and oxygen barrier properties. Additionally, the mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

To the solvents of claim 1, while Kaczun does not expressly teach them, Anderson teaches solvents such as alcohols as recited in col. 23 (Table) and col. 3, lines 23-24.

It would have been obvious to one having ordinary skill in the art to have modified the ink layer of Kaczun to employ the ink composition of Anderson including the solvents because they are useful ingredients for the aqueous dispersion for inks or coatings to arrive at the hyperbranched polyester with the claimed acid numbers exhibiting improved adhesion to polyolefin films (col. 3, lines 23-24, col. 23, and col. 25, lines 30-55, Anderson).

Claims 1-12 are met.

Claim 2 is directed to process derived limitations (print layer printed directly) in a product claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698. Both Applicant's and prior art reference's product are the same.

Claim 5 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Kaczun et al. (WO 97/38849) in view of Anderson et al., and further in view of Peiffer et al. (US 6,517,932) as previously presented in the 06/19/07 and 12/14/07 Office Actions reiterated below.

The combination is relied upon for all that it teaches above.

The combination does not expressly teach PEN film as per instant claim 5.

Peiffer discloses PE, polyethylene naphthalate (PEN) and PET are equivalents used for the same purposes as material for film composites in packaging purposes (2:39-55, 3:1-10).

It would have been obvious to one having ordinary skill in the art to have modified the combination to substitute, use, or include PEN because Peiffer teaches it is an equivalent of PE used as material for film composites in packaging purposes (2:39-55, 3:1-10).

#### **(10) Response to Argument**

Appellant argues the combination of Kaczun in view of Anderson, alleging there is no suggestion in Anderson to include polymers into the solvent-based perfume barrier layer of Kaczun (pointing to Kaczun's linear aromatic polyesters). However, this is not a persuasive argument because Kaczun teaches in general inks printed in between polyolefin-based film layers, polypropylene and polyethylene (see Abstract, Fig. 1, page. 9, Example 1, and page 5, describing inks 14 are applied and printed between the polyolefin packaging film) and Anderson explicitly teaches the inventive hyperbranched polyester included in inks, used in film printing and packaging, for the reason of adhering well to a polyolefin films also (see col. 25, lines 30-45). It is



significant to note that Kaczun does not teach that the print layer is organic solvent based contrary to Appellants arguments. Rather, Kaczun generally teaches inks which would include both solvent-based and water-based inks and thus combination with Anderson is proper. Further Appellant has provided no evidence, such as comparative test data to prove otherwise.

At col. 6, lines 45-68, Anderson teaches aqueous dispersions used as film printing inks (abstract, 9:1-41) employing a polyester using polycarboxylic acid (-COOH group) and their derivatives at 6: 42-53 and 7:1-15 (acids including dicarboxylate, dicarboxylic and adipic acids) and additionally using a myriad of alcohols (-OH group) having more than two functional groups, such as trimethylol propane found at 6:58, which has three functional groups, which would produce hyperbranching as is consistent in meaning with Appellant's specification (page 8-page 10). The same polycarboxylic, dicarboxylic, and adipic acids and alcohols Appellant uses are a preference in his specification (found at page 9, line 45 and page 10, line 3, and page 15, Example 2 and Table 1 showing values within the claimed ranges), also denoting trimethylol propane has a functionality of three, in the synthesis reaction for the resultant hyperbranched polyester (page 8, lines 15-45-page 10, line 3). Also note at 8:45-50, Anderson teaches the resulting polymeric ABA polymer is highly branched and the polymer A contains methacrylic acid, which contains an -OH group (see further Table 3, Anderson teaching acid numbers from 83 to 148 and 8:55-57, also within Appellant's ranges of acid numbers such as those of

Example 2 results in Table 1 of Appellant on page 16 of the instant specification), and the molar ratio is 3:1 A to B containing said functional groups, which overlaps the instant ratios recited (see Appellant's specification on page 10, lines 43-45, reciting 3:1). Thus because the same starting reactionary materials, the same substituents, overlapping molar ratios, and overlapping acid numbers are taught by Anderson, a hyperbranched polyester as claimed having the values recited must result therefrom or are obvious to obtain, absent any evidence to the contrary. Appellant has not provided any evidence, merely arguments, and thus the rejections are sustained.

Appellant argues Anderson et al generally teaches the reaction product of an A polymer having 3.5 or more reactive functional groups per polymer chain and a B polymer having about 2 to about 3 functional groups per polymer chain that are co-reactive with the reactive functional groups of the A polymer, to further argue that there are a large number of possible combinations of A and B according to Anderson and thus the recited values are not suggested.

The Examiner agrees with the teachings of Anderson, in that out of the large number of possible combinations, one must result in Appellant's same claimed hyperbranched polyester end product. Appellant argues the functionality of 3.5 or more is to the addition polymer (see 5:65-68), however, this is not to the polyester. The polyester is the B polymer and the B polymer includes the functional groups, listing hydroxyl and carboxyl groups (6:29) and

thus are not on the A polymer as Appellant alleges (see page 9, bottom paragraph). Again, the B polymer has all of the same aforementioned starting materials as Appellant, despite Appellant's arguments that Anderson teaches a general disclosure of polymers but they are unspecific.

Appellant points to some examples alleging no OH groups are present, however, instant claim 1 also recites carboxyl groups, and this argument is not convincing because Anderson teaches examples of carboxylic acids, methacrylic acid, and alcohols with more than two functional groups, so remaining OH groups are included. Especially since at col. 7, lines 60-65 Anderson teaches the B polymer having 2 to 3 functional groups per polymer chain (and thus must leave 2 to 3 groups to react with A), which groups are the same as Appellant and the same reaction materials having enough remaining OH groups left to co-react with the reactive functional groups of A polymer as explained by Anderson. Thus the resultant polymer must inherently characteristically possess an OH number, while not explicitly stated as an "-OH number", because the same starting materials are reacted and a similar acid number like that of Anderson (8:56-58 and Table 3) is already taught within Appellant's range. It is noted that where the examiner has reason to believe that a property asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, he or she possesses the authority to require the applicant to prove that the subject

matter shown to be in the prior art does not possess the characteristic relied on, *In re Swinehart*, 169 USPQ 226, 229 (CCPA 1971). When the claimed and prior art products are identical or substantially identical in structure or are produced by identical or a substantially identical processes, a prima facie case of either anticipation or obviousness will be considered to have been established over functional limitations that stem from the claimed structure. *In re Best*, 195 USPQ 430, 433 (CCPA 1977), *In re Spada*, 15 USPQ2d 1655, 1658 ( Fed. Cir. 1990). The prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed products. *In re Best*, 195 USPQ 430, 433 (CCPA 1977). When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112- 2112.02. A *prima facie* case has been established, and therefore the burden shifts to the Applicant to submit additional objective evidence of nonobviousness, such as comparative test data showing that the claimed invention possesses improved properties not expected by the prior art. Arguments of counsel cannot take the place of factually supported objective evidence. See, e.g., *In re Huang*, 100 F.3d 135,139-40, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996); *In re De Blauwe*, 736 F.2d 699,705, 222 USPQ 191, 196 (Fed. Cir. 1984). As of now, no comparative

data has been presented in the record. Until the Applicant has convincingly argued or has provided evidence to the contrary, the rejections are maintained.

Appellant argues it is not clear where the inks of Kaczun are taught. Appellant is directed to page 9, last sentence on the bottom of the page, Kaczun explicitly stating (14) are inks (shown in Fig. 1 and pictured in Abstract) in between the polyolefin films (12 and 11 of high and low density polyethylenes). Kaczun was not used to teach the lacquers or barrier layers, in reference to Appellant's allegations to the contrary, but was used to teach 1) the overall structure using polymeric polyethylene films in a packing, as shown in Fig. 1 and 2) the use of a printing ink layer. The printing ink layer of Kaczun is again, a general teaching, and thus adding or substituting the ink composition using the polymers of Anderson would not negatively impact the combination, as Anderson teaches the composition is useful as an ink for packaging films, like that of Kaczun. Thus, regardless of the type of lacquer, dispersion, or solutions, this is irrelevant as the combination is proper for the reasons set forth above.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Tamra L. Dicus/

Tamra L. Dicus

Examiner, Art Unit 1794

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